

Remarks/Arguments:

Claims 1-27, 30, 33-35 are pending upon entry of this response. Claims 28, 29, 31 and 32 are canceled herein.

Claims 10-13, 16-21, 24 and 25 were allowed in the Action. Claims 2-4, 7, 9, 29 were indicated to be allowable (presumably if combined with the base claim and possibly intervening claims). Claims 14, 15, 22, 23, 32 and 35 were indicated to be allowable outside of the rejections under Section 112.

Rejection of the Abstract of the Invention

The Abstract is amended to reduce its length.

Rejection under 35 U.S.C. 112

Claims 14 and 22 were rejected because the recitation “biased for digital operation” was found to be indefinite. The Applicant has deleted the objectionable language. The Applicant notes that the originally filed specification does provide a discussion to define “biased for digital operation” on page 20, lines 16-20.

Claim 30 was rejected for being misdescriptive because the claim’s multi-modulus receiver requires inputs from a frequency source and a modulus control signal. The Action states that Figure 4 does not show a modulus control signal being produced to the multi-modulus divider module. The Applicant notes that Figure 4 does show a modulus control signal 182 that is produced by swallow counter 178 to pre-scaled divider 174. If this response does not address the concern of the Examiner, the Examiner is invited to contact the undersigned attorney to clarify the issue.

Claim 31 language is amended in response to the rejection relating to the bias signals and is inserted into claim 30 with the appropriate corrections.

Claim 35 is amended in response to the rejection relating to clocking signals.

Various dependent claims were rejected for depending upon the rejected claims addressed above. It is believed that their grounds of rejection are now moot.

Rejection under 35 U.S.C. 102

Claim 1 was rejected under Section 102(b) as being anticipated by Lee et al. (US 6,424,192). According to the Action, Lee et al. show in Figure 5 the elements of claim 1 of the present application. The Action states that Figure 5 shows a low noise divider 500 that includes a pulse swallow divider (510, DFF0, DFF1) and first to third latching blocks (DFF2, DFF3, DFF4). Further, the Action states that the pulse-swallow comprises a pre-scaled divider block 512.

The Applicant respectfully notes that the claim requires:

a pulse-swallow configured divider module for producing a pre-scaled divider output based upon the oscillation produced by the VCO and a divided oscillation based upon the pre-scaled divider output <emphasis added>;

The Applicant respectfully submits that block 512 which the Action refers to as a pre-scaled divider block 512 does not produce both outputs required by the claim. As such, block 512 of Lee et al. does not anticipate the pre-scaled divider block of the present claim.

Independent claim 26 was also rejected under Section 102 but claim 29 was indicated to be allowable. As claim 29 depends on claim 28 for antecedent support, claims 28 and 29 are cancelled and their limitations are inserted into claim 26 rendering claim 26 allowable. Lee et al. do not seem to show the claimed features of claim 26 as presently constituted.

Claim 30 was also rejected under Section 102 but claim 32 was indicated to be allowable. Claims 31 and 32 are cancelled and their limitations are inserted into claim 30. Claim 30 as presently constituted is now believed to be allowable. Lee et al. do not seem to show the claimed features of claim 30 as presently constituted.

Rejection under 35 U.S.C. 103

Claims 8, 27, 28, 34 and 35 were rejected under Section 103 as being unpatentable over Lee et al. in view of Johnson et al. (US 6,707,305). The Applicant notes that claim 28 is canceled and that each of the other claims depends upon a base claim that is allowable or is believed to be allowable as discussed above. Moreover, the Applicant does not believe that Johnson et al. disclose relevant art. The Official Action states that Johnson et al. disclose the limitation of a buffer coupled between the VCO and the low noise divider. Referring to the description of Figure at col. 6, lines 58 – col. 7, line 7, and to Figure 3 of Johnson et al., a probe 102 produces a signal to a preprocessing stage 103 that includes a buffer 104 at an input of stage 103. The buffer 104 output is produced to a gains stage 107 that produces an amplified signal to an anti-aliasing block 109. Johnson et al. specifically state that buffer 104 “is an input protection buffer designed to protect against over voltages and over currents.”

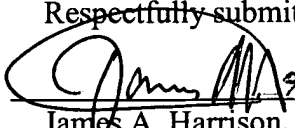
Clearly, Johnson et al. do not show a buffer between a VCO and low noise divider as the claim requires. Further, Johnson et al. are in the field of test equipment and, more particularly, of tone generators for testing cables. The present invention and Lee et al. are in the field of phase locked loops (frequency dividers used therein) used in a radio front ends and other similar circuits. Thus, the Applicant urges that the Johnson et al. do not teach analogous or related art that may properly be combined with Lee et al. to form a rejection under Section 103 of the Patent Act.

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the references must teach or suggest all the claim limitation. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the cited references, and not based on applicant's disclosure. MPEP 2143, p. 2100-121 (August 2001).

Applicant respectfully traverses this rejection in that a *prima facie* case of obviousness has not been established. Because all of the independent claim are believed to be allowable as discussed above, their corresponding dependent claims are allowable as a matter of definition (with respect to rejections under Sections 102 and 103) since they only limit the scope of allowable claims.

Please direct any questions or comments to the undersigned attorney regarding the Notice of Allowance in this case.

Date: January 20, 2006

Respectfully submitted,

By: _____
James A. Harrison, Reg. 40,401
Garlick Harrison & Markison, LLP
P.O. Box 670007
Dallas, Texas 75367
(214) 902-8100/office
(214) 902-8101/facsimile